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JULY 1988

ELECTRIC LIGHT & POWER

EL&P

Volume 66, Number 7
A PENNWELL PUBLICATION

VOICE OF THE ELECTRIC UTILITY INDUSTRY

Pact kills Shoreham

Rates could rise more than 15%; power shortage likely

Mark T. Hoske
Assistant Editor

HICKSVILLE, NY—Long Island Lighting Co.'s "agreement in principle" with the State of New York seems likely to lead to decommissioning of the $5.4-billion, 809-MW Shoreham nuclear plant before commercial operation. In return, the utility would receive a concession package that includes 15 percent in rate hikes over three years.

Gov. Mario Cuomo gave LILCo a June 15 deadline to draft and approve the pact, or threatened to drop the deal. Joseph McDonnell, a LILCo vice president, said the utility would make every effort to meet that deadline.

Other terms of the May 26 landmark agreement, the result of several years of on-and-off negotiations, include restoring LILCo dividends, raising senior debt to investment grade, and transferring responsibility for future generation to the state.

If LILCo directors and the state forge a final agreement approvals are needed from state legislators, public service commission, LILCo shareholders, the Nuclear Regulatory Commission, and the Internal Revenue Service. Sources indicate the needed approvals are likely and are expected within 90 days.

On May 31, LILCo rejected the state-formed Long Island Power Authority's $12/share bid. LIPA, formed to take over LILCo, had raised its bid twice from $8.75/share (*EL&P*, June, page 1).

Continued on page 12

How much does electricity cost industrial/commercial customers?*

Country	Rate/kWh	87-88 % Change
West Germany		0.2
United Kingdom		5.5
Belgium		-2.0
Italy		3.2
U.S.		-0.2
Ireland		-4.9
Netherlands		1.1
France		0.0
Canada		8.7
Sweden		4.6
Australia		5.9

Source: National Utility Service, Inc., Wall Street Journal of 5/25 for international exchange rates.

*Customer rates based on 1,000-kW demand, 450,000 kWh per month use and primary service only.

Company earnings fall 4.6%; sales up 4%, according to EEI

WASHINGTON—Earnings per share of investor-owned electric utilities dropped 4.6 percent in 1987 to $2.68 per share, down from $2.81 in 1986. The decrease was partially due to write-offs from regulatory disallowances, construction-related rate actions and accounting changes, says the Edison Electric Institute.

Without the writeoffs, however, earnings would have increased by 6.4 percent. But despite the EPS decrease, the quality of earnings improved as non-cash sources decreased and sales were up, according to EEI's annual financial summary, released in late May.

Sales increased 4 percent; operating revenue increased by 2 percent to $130.6 billion, while operating expenses increased just 1.2 percent to $1.3 billion. Reasons for the slight increase include decreasing fuel expenditures and the impact of the Tax Reform Act which caused large decreases in deferred income tax expenses and investment tax credit expenses.

Operating ratio drops for 7th year

For the seventh consecutive year, the industry operating ratio (ratio of expenses to revenues) dropped, to 78.9 percent in 1987 from 79.6 percent in 1986, mainly due to continued efficiency and cost cutting measures opted by utilities, I explained.

Allowance for funds ed during construc- n (AFDUC) dropped percent to $5 bil-

ontinued on page 11

LATE NEWS

San Diego Gas & Electric Co. and Tuscon Electric Co. plan to merge. Two separate divisions would operate under a San Diego-based holding company that was unnamed as of the June 13 disclosure. Shareholders, regulators and others must approve the merger. (See story, page 15.)

Public Service of New Hampshire does not have to immediately start $3.5-million monthly interest payments to third-mortgage bondholders, says the bankruptcy court, a move that allows PSNH to continue its Seabrook payments. (See story, page 10.)

OSHA can regulate utility power plants, a federal appeals court in Washington, DC, ruled. The Edison Electric Institute argued that the 1971 National Electrical Code precludes any regulation by the Labor Department's Occupational Safety and Health Administration. A three-judge panel ruled that while OSHA cannot regulate power-generation safety conditions, it can regulate other areas, such as coal conveyors.

450-kV dc HQ-NEPOOL tie rises

Construction workers pour footings for a 450-kV dc tower in Goffstown, NH, part of Phase 2 of the Hydro-Quebec/NEPOOL interconnection. The H-frame, lattice-steel tower will be similar to the tower in the background. The dc line is centered between two existing 230-kV ac lines on a 350-ft right-of-way. Construction work, begun in February, will continue through 1989, with commercial operation slated for Sept. 1, 1990. The 1310-MW, $565-million, part-2 project, expands total line capacity to 2000 MW. The interconnection extends 930 miles from an H-Q substation near James Bay to the Sandy Pond substation at Ayer/Groton, MA. New England Electric System is coordinating the project.

Dukakis: Delay new N-plants, use clean coal, other energy

WASHINGTON—Democratic presidential candidate Michael Dukakis would not support development of new nuclear plants until sufficient nuclear waste sites are found and would reopen the site selection process, giving states a larger role.

He would also support clean coal research, search for a cure for acid rain, and increase federal participation in alternate energy sources, according to his position paper on energy policy, says the *EEI Washington Letter*.

Energy policy outline

Saying there's no energy policy now, Dukakis' stated positions are:

- Nuclear: Add no new nuclear plants without sufficient waste sites and a new generation of reactor design; lift the liability limit for nuclear utilities, contractors or others in the industry; start over with a new waste site selection process giving states a larger role; name a new NRC chairman to provide a new reorganization plan.
- Coal: Support and possibly increase clean coal research, development and demonstration; protect coal mining jobs; find answers to acid rain, greenhouse and ozone problems.
- Oil and gas: Repeal the windfall profits tax; fill the strategic oil reserve; do not use import taxes; provide temporary regional aid for oil-patch recovery.
- Alternative energy: Increase federal help for R&D for solar, biomass, wind, wood, photovoltaics and alcohol energy sources; support cogeneration and FERC's efforts to update PURPA rules.
- Conservation and efficiency: Aggressively implement the Appliance Standard Act; increase federal support; demonstrate energy efficiency in federal buildings, by installing better lighting and cogeneration, for example.
- Transportation: Increase use of ethanol and methanol for transporation, using price incentives and regulatory requirements.

News Briefs

JILL MINNER, Assistant Editor

Braidwood 2 given full-power operating license

Unit 2 of Commonwealth Edison Company's Braidwood nuclear generating station has been granted a full-power operating license by the Nuclear Regulatory Commission. The utility said it will continue its testing program and expects the unit to be in service sometime this summer.

Joint venture to explore for oil, natural gas

A joint venture, formed by Northern Michigan Exploration Co. (NOMECO) and Petrocorp Exploration Limited of New Zealand, is planning to search for oil and natural gas in the U.S. Gulf Coast region. The venture said it expects to spend a minimum of $5 million during the exploration phase of the drilling program, which will take place throughout 1988 and 1989. According to NOMECO's parent company, CMS Energy, five wells along the Texas-Louisiana Gulf Coast are already scheduled for drilling. Additional exploratory wells, both onshore and offshore, will be added as the program progresses. Petrocorp Exploration is a wholly-owned subsidiary of Fletcher Challenge Limited.

Westinghouse raises its equipment prices

Westinghouse Electric Corporation's Power Equipment Division has issued an immediate, five-percent increase on all of its oil-filled instrument transformers and all bulk and condenser bushings. The company said it will honor all outstanding quotations until their normal expiration date.

Bechtel reorganizes

Bechtel Group, Inc. (BGI) announced that it is reorganizing in order to better serve the changing needs of the utility industry. BGI said it plans to consolidate its two power companies into one operating company, Bechtel Power Corporation (BPC). The company said its new organization will consolidate management and overall corporate resources, which will result in simpler communications, improved efficiency and reduced costs. BGI Executive Vice President Cordell Hull was chosen as president of BPC. Loren Hinkelman, president of Bechtel Western Power Co., and Howard Wahl, president of Bechtel Eastern Power Co., will serve as BPC's managing directors.

The Southern Co. forms new subsidary; Franklin named to head Southern Co. Services

The Southern Company said it plans to form a new subsidiary which will provide management and technical services for the nuclear power plants at its other subsidiaries. The new subsidiary, Southern Nuclear Operating Company, will service Alabama Power's Farley plant and Georgia Power's Hatch and Vogtle plants. "By pooling our nuclear expertise in one company, we expect to build an organization that will consistently excel in the field of nuclear operations and offer greater opportunity for the professionals involved in this specialized work," stated Southern Company President Edward L. Addison.

In other Southern Company news, H. Allen Franklin was appointed president and CEO of Southern Company Services, Inc., replacing A.W. (Bill) Dahlberg who was named president of Georgia Power. Franklin was previously executive vice president of the company. Southern Company Services, Inc., provides technical and specialized services to The Southern Company and its subsidiaries.

ANSI president announces retirement

Donald L. Peyton, president of the American National Standards Institute (ANSI), announced that he plans to take early retirement at the end of 1988. Peyton, who has served as president of ANSI since 1966, was responsible for restructuring the former American Standards Association and developing new programs and funding. Peyton said he is retiring in order to devote more time to the development and administration of international standards programs, but that he will remain a consultant to ANSI.

MVEA picks president

The Missouri Valley Electric Association has selected Stewart W. Smith, Jr. as its president. Smith is currently executive vice president of Union Electric Company. L.K. Vorbrich, executive vice president of Iowa Power & Light Co., was chosen as vice president of the association.

Utilities fined by NRC

The Nuclear Regulatory Commission recently proposed the following fines:

Arizona Public Service Co.
A $100,000 fine for alleged violations of NRC requirements at the Palo Verde nuclear generating station.

Baltimore Gas & Elec. Co.
A $300,000 fine for alleged violation of NRC requirements at one of the Calvert Cliffs nuclear plants.

Carolina Power & Light Co.
A $50,000 civil penalty for alleged noncompliance with NRC environmental qualification requirements at the Brunswick nuclear power plant.

Commonwealth Edison Co.
A $150,000 fine for failing to adequately test certain equipment at Unit 3 of the Dresden nuclear power station. And a $50,000 fine for a design error at Unit 1 of the Braidwood nuclear power station.

Florida Power Corp.
A $50,000 civil penalty for alleged noncompliance with NRC requirements at the Crystal River nuclear power plant.

Houston Lighting & Pwr Co.
A $50,000 civil penalty for alleged violations at the South Texas Nuclear Project.

NE Nuclear Energy Co.
A $50,000 fine for alleged violations at Unit 3 of the Millstone nuclear power plant.

Omaha Public Power Dist.
A $112,500 fine for alleged violations of NRC radiation protection requirements at the Fort Calhoun station.

Customers vote in favor of staying with SDG&E

Customers in San Diego Gas & Electric Company's South Laguna Beach, CA area have voted to continue receiving service from the utility. South Laguna was recently annexed to the city of Laguna Beach, which is served by Southern California Edison Company. According to SDG&E, the Laguna Beach City Council unanimously opposed asking the California Public Utilities Commission for a change in electric utility service boundaries. SDG&E customers cited lower rates, a good service history and SDG&E's community involvement as reasons for voting against the change.

More utilities conserve with "negawatt hours"

Both Boston Edison Co. and Commonwealth Edison Co. have purchased conserved kilowatt hours or "negawatt hours" from third party conservation companies, according to Sentinel Energy Savings Corporation. The negawatt hours are usually purchased as an alternative to generated kWh or to purchasing power from other utilities. The alternative power will be used by Boston Edison for its Energy Conservation Retrofit pilot program, and by Commonwealth Edison for its pilot Residential Energy Efficiency Program. Other organizations that have started negawatt-purchase programs include: Central Maine Power Co.; Commonwealth Electric Co.; Western Massachusetts Electric Co.; Jersey Central Power & Light Co.; Metropolitan Edison Co.; Pennsylvania Electric Co.; and the Bonneville Power Administration.

CMP helps save energy with 'buyback' program

Central Maine Power Co. (CMP) recently paid Boise Cascade Corp. $800,000 under the terms of a $2-million electric "Efficiency Buyback" contract between the companies. CMP's "Efficiency Buyback" pilot program, approved by the Maine Public Utilities Commission in 1986, allows its commercial and industrial customers to propose projects that will reduce energy use by at least 500,000 kWh per year. Projects that qualify are then eligible for a payment based either on project cost or on a reduction of the payback period of the investment. CMP said Boise Cascade qualified for the payment by contracting to reduce its energy use at the Rumford paper mill. Another 50 percent of the total payment due Boise Cascade will be paid out gradually as work progresses, and the final 10 percent will be paid when the project is completed, according to the utility.

DP&L says it ranks first in productivity

Dayton Power & Light Co. (DP&L) said its generating plant productivity level ranks first in the nation, over 12 percent higher than the industry average. In addition, the utility has received the Institute of Industrial Engineers' 1988 Award for Excellence in Productivity Improvement. The award was given in recognition of DP&L's improvements in the productivity and efficiency of its coal-fired generating units, according to the company.

Atlantic Group honored by Virginia Power

Virginia Power's Nuclear Operations department recently named The Atlantic Group as its 1987 Contractor of the Year. The Atlantic Group, headquartered in Norfolk, VA, was recognized for making the 'most meaningful contributions during the course of a year' in support of Virginia Power's goals, according to the utility.

NOMECO to supply MCV with natural gas

Northern Michigan Exploration Co. (NOMECO), a unit of CMS Energy Corp., has agreed to supply five percent of the natural gas required for the Midland Cogeneration Venture (MCV), according to CMS. Under the 12-year agreement, NOMECO will provide gas at a rate of 10 million cubic feet per day when the MCV begins operating in early 1990. CMS stated that, with this new agreement, the initial gas requirements of the MCV in 1990 are now in place and over 75 percent of all gas needed by 1994 has been committed under long-term firm supply agreements. The MCV is the first conversion of a nuclear project to a natural gas-fired, combined-cycle cogeneration facility. According to CMS, the Midland Cogeneration Venture will be the nation's largest cogeneration power plant.

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COMMENTARY

Thoughts on the way to EEI's Washington convention

Shoreham's demise, if it comes, may be more a blow to the nuclear power industry than to the Long Island Lighting Co. Chairman William Catacosinos has negotiated a win-win agreement with the State of New York, all things considered. The company will receive the benefits of it's investment in the ill-fated nuclear plant, receive a return on that investment, and get guaranteed rate increases over the next three years. It also will shift the burden of power supply directly to the state. The agreement, if approved by the June 15 deadline, ensures the company's financial recovery, over time, and offers a gracious way out of what already is a tenuous power supply situation.

But abandonment of the completed, ready-to-generate plant establishes a serious precedent. Other plants, such as the completed Seabrook Nuclear Plant of Public Service of New Hampshire, or even Boston Edison's Pilgrim Station, would now seem to be at greater risk. The Shoreham solution also casts its shadow over incomplete nuclear plants at utilities whose reputations have been tarnished by poor performances and serious reprimands, such as Philadelphia Electric. The nuclear industry is far from being out of the woods.

U.S. leadership in nuclear technology also is slipping overseas. Britain's Central Electricity Generating Board is reported to be working with the French to come up with an advanced pressurized-water reactor design. This new design could replace planned replication of the Westinghouse-based PWR design selected for Sizewell B after only two or three units. CEGB suggests that its need for new capacity increases rapidly after the year 2000 and that there may be economies from the French design. The French unit would incorporate a single half-speed 1400-MW turbine-generator in place of the two 660-MW turbine-generators of the Westinghouse/Sizewell B concept. Also, based on demonstrated French designs of longer fuel elements, the advanced PWR units could result in a 20-percent increase in output compared to the Westinghouse design. The French nuclear program, the most ambitious in the world in recent years, has slowed, but there's been little decline in its research-and-development efforts, efforts backed by aggressive demonstration programs. The U.S. may still have technological leadership in many areas, but our inability to continue to demonstrate new technologies has cast a shadow.

Transmission access is considered a must by non-utility proponents of cogeneration and independent power production. Such access, they argue, is essential if free competition in the marketplace is to exist, as contrasted with the current protected markets guaranteed to utilities in return for accepting regulation. So vital is transmission access to development of non-utility power generation, that Federal Energy Regulatory Commission members now are suggesting their own proposed rulemakings on competitive bidding and independent power production cannot survive as proposed unless transmission reform is completed first.

Investor-owned utility leaders are deeply concerned that simplistic regulatory approaches to providing easy access to markets for non-utility generators can destroy the carefully planned and balanced movement of power on the transmission grid...a balance that produces a reliable power supply. Such free access, uncoordinated and without commitment to balance operations, can ultimately only prove to be an expensive inconvenience to all users of the transmission systems involved.

Maglev trains have been discussed for years, but now there's a possibility that the first U.S. demonstration of magnetic levitation technology could be operating in Florida by 1992. Several high-speed train routes have been discussed for the Sunshine State, but receiving the greatest show of interest is the one that would run 20 miles from the Orlando airport to Disney World (where else!). The $700-million short-line system has been offered franchise rights by the state of Florida, but no funding. The state also has offered fast-track environmental permitting. The Maglev of Florida consortium, a Japanese group, would employ low-temperature superconductivity technology currently being developed by Japan's Railway Technical Research Institute. So far, the consortium has acquired most of the required rights-of-way and says it could build the system in two to three years. Whatever happened to American ingenuity and entreprenuership?

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ELECTRIC LIGHT & POWER (USPS 858-860) is published monthly by the PennWell Publishing Company, 1421 S. Sheridan Road, Tulsa, OK 74112.

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Second class postage paid at Tulsa, OK. Subscription: $38 per year (U.S.); $46 (Canada); $66 (foreign); $108 (foreign air mail). Single issue price: $4 + postage ($5 + postage Canada, and $7 + postage foreign). Copies of back issues are available on microfilm from Univ. Microfilm, 300 N. Zeeb Road, Ann Arbor, MI 48103, and on microfiche from Micro-Photo Div. of Bell & Howell, Old Mansfield Road, Wooster, OH 44691. Postmaster: Send address change to ELECTRIC LIGHT & POWER, P.O. Box 2680, Tulsa, OK 74101.

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LETTERS

Late night at the old power plant

With power plant operator alertness ranking high as a serious electric utility industry concern (evidence *EL&P's* ongoing series of articles on the subject of shift work in the May 1988 issue), the problem seems toughest on the night shift. It's no fun subduing one's nocturnal urges to snooze. And rotating shifts compound the problem. Perhaps these anecdotal glimpses from my late-night shift experiences in a coal-fired plant thirty years ago contain some germs of thought applicable to today.

By observation I learned that success in maintaining all-through-the-night plant-operator alertness lay with the varied personalities of the individuals on a given shift roster. There was the control room operator, a member of a fraternal organization known for its marching bands, who brought in his clarinet to practice for upcoming parades. Speculation had it that this was his wife's idea. Irritation was the operative word for this technique. None could sleep with that raucous squawking and squealing! An important point here was his use of a musical instrument of the woodwind family. These have an especially high *co-efficient-of-irritation* when played by the average control room operator.

Then there was the cagey, old watch engineer who ruled by intimidation. He would leave his little shanty of an office on the turbine deck to creep surreptitiously out into the plant, and change the set-point on, say, a heater drain level controller. He then stole back to his lair to watch his clock, measuring how long it took his operators to detect and react to the change. None dared sleep! In the use of this technique it is important not to 'mess' with a critical plant system. Otherwise, the ruckus associated with a plant trip will awaken many more people than just the plant operators. And who needs a phone call—while the plant is still writhing in the throes of the trip—from the local pain-in-the-butt who jingles the control room telephone to express displeasure at being roused from slumber with the lifting of the safeties.

But the night watches on which all hands were widest awake—AND VOLUNTARILY AT THAT—were those where at least one of the crew on duty was either a 'real character' or 'philospher'. (If the world only knew how many of society's ills are resolved at impromptu, all-night, night-shift forums!) And if the character/philosopher happened to be the top-ranking man on the watch, so much the better!

One such individual was a short, rotund, gregarious raconteur of a watch engineer whom I'll call Newton Griffith. "Griff" dressed for his role by wearing a traditional, wonderfully-nostalgic power engineer's costume: light-gray, starched, pressed and pleated, chino-cotton "blouse" ("It's *not* a SHIRT," feisty Griff would retort) with billowing sleeves; charcoal-gray, heavy-twill trousers; wide, black leather belt; a bandana-type handkerchief from his assortment of many in the traditional patterns and colors, each selected to match Griff's particular mood of the day; polished, black leather work shoes; topped off by a gray and white striped, also pleated, duck-billed power engineer's cap. Heavy-duty work gloves—with long, stiff, protective arm cuffs—were ever present, as was his stogie cigar.

As "the old man" on watch, Griff set the tone for his shift. First, he employed a patently no-nonsense approach to putting outstanding plant 'business' to bed. Only then, when all shift turn-over items were properly attended to, would he loose his propensity to pontificate to keep the men on his shift from nodding off. Assuming 'center-stage' in the control room, Griff channeled his natural abilities into a technique that proved to be the most successful for shift crew alertness. He regaled us with true-to-life stories—ribald and otherwise—like you wouldn't believe!

One such tale has stuck with me down through the years. It was the time Griff's 'old lady's' cat went doo-doo in one of his work shoes. And "wouldn'cha know", it happened on a night that he was late for work. No problem. Griff simply, as he told it, sent the critter to kitty heaven by whirling said tabby overhead by its tail, letting go just as the right amount of centrifugal force had built up, and then—to assure its being a one-way trip—assisted the process at the precise apogee of cat's trajectory with a charge from his 12-gauge shotgun! Of course, there was no way of actually verifying if Griff ever really played skeet-shoot with the house cat. But at 4 o'clock in the morning, no one particularly cared!

Peter Kushkowski
Northeast Utilities
Haddam, CT

Getting utilities' nuclear acts in order

It *is* about time! We have searched all of the trade publications for months for some indication of optimism.

Here are some of the utilities problems.

1. The era of doubling system loads every ten years is over.

2. It takes too long to get a nuclear plant on line and too long to load the big machines.

3. 'Worst case' reactor failures have not affected the public but still pose serious capital investment risks; we still need to convince the public about safety.

4. Cogeneration is here to stay, but questions remain regarding reliability, FERC and PURPA regulations.

5. Worries continue about nuclear related failures; low-steam conditions, capital intensive costs and risks, and spent fuel disposal, even liquidation. These are monumental time consumers for nuclear executives.

Problem #1. The first responsibility is to make existing nuclear plants secure. The simultaneous responsibility is to plan for the use of 'Advanced Reactors,' since we all know that we can expect to face restrictions on all fossil fuels within a dozen years.

In our world-wide experience in the technical, administrative and financial disciplines, many developments have come to our attention. For the past 24 years, it has been my privilege to serve on the Board of Directors of the Metropolitan Water District of Southern California. During these years I have served as Chairman of the Engineering and Operations Committee and presently as Chairman of the Energy and Desalination Committee. At Metropolitan, we recognize that our next water supply must come from sea water desalination via cogeneration and nuclear power. Just after the turn of the century, the population in Southern California is expected to reach 18 million from the present 14 million.

In the late sixties we saw the first helium cooled reactor in West Germany, and the first helium cooled reactor installation in 1974. Helium is the key word; here is an inert element that does not become radioactive and has developed to give us 'fossil fuel' steam conditions, 1000 degree F and 2400 psig, for

Continued on page 13

Utilities top industrials' investment value, says NARUC

WASHINGTON—Common stockholders of almost 75 percent of all major electric and telephone utility companies earned a higher return on their investments than those of major U.S. industrial corporations from 1972 to 1987, says a recent study by the National Association of Regulatory Utility Commissioners.

The 55-page study concludes that utility companies were less risky and more profitable investments for common shareholders than the average non-regulated corporation over the past 16 years. It also suggests that the superior earnings for shareholders of utility investments may ultimately translate into a lower cost of capital for utility companies and lower utility rates for consumers.

Ten telephone companies were included in the 103 utilities analyzed.

Consolidated Edison Co. of New York, the utility with the highest average, returned 23.4 percent on common shareholders' investments, while General Public Utilities, owner of Three Mile Island, returned the lowest average to investors at 4.6 percent.

That ConEd had both the highest electric rates and the highest shareholder return on investment was a coincidence, said Mike Foley, NARUC's director of financial analysis and the report's author. There's no correlation between shareholder rate of return and electric rates, he explained. LILCo, he pointed out, has one of the highest electric rates, but one of the lowest shareholder rates of return.

Shareholder returns, as measured by changes in stock prices and cash dividends paid to common stockholders, were used to calculate the average internal rate of return for investors.

The formula for internal rate of return accounts for the timing and amount of dividends, Foley explained. Utility stocks generally pay higher dividends than do industrials, but gain market value more slowly, so usually return smaller capital gains when shareholders sell, he said.

Average rate of return

The study found that electric and telephone utility stockholders earned an average internal rate of return of 13.13 percent, while the Standard & Poor's Index of 400 Industrials returned 11.46 percent, and the Value Line Industrial Composite returned 11.78 percent during the period.

Foley said the study considers federal income tax law changes as they relate to capital income, the total earnings on investment for shareholders, including dividends.

Turnaround for 1987

Despite the better performance utilities showed over 16 years, industrials outperformed utilities during 1987, explained Mark Luftig, an analyst with Salomon Brothers Inc. Utilities, however, have regained the advantage over the S&P 500 this year, Luftig said.

The NARUC study starts from utilities' low period of the early 1970s, Luftig noted. Utilities have benefitted from low interest rates, but that advantage is slipping away as rates creep upward, he added.

For a copy

The study, "Electric and Telephone Utility Stockholder Returns: 1972-1987," may be obtained for $15 from NARUC, P.O. Box 684, Washington, DC 20044.

Highest Shareholder Av. Ret. '72-87

Rank	Company	%
1.	*Consolidated Edison Co.*	*23.44*
2.	*Tucson Electric Power*	*21.35*
3.	*So. California Edison Co.*	*18.39*
4.	*Potomac Electric Power*	*18.12*
5.	*CP National Co.*	*18.00*

Lowest Shareholder Av. Ret. '72-87

Rank	Company	%
103.	*General Public Utilities*	*4.61*
102.	*Public Service of Indiana*	*4.67*
101.	*Northern Indiana PS Co.*	*5.38*
100.	*Long Island Lighting Co.*	*5.93*
99.	*CMS Energy*	*6.77*

SDG&E, TE to merge; judge opposes UP&L

SAN DIEGO—San Diego Gas & Electric Co. and Tuscon Electric Co. plan to merge into two divisions operating under a new San Diego-based holding company, unnamed as of the June 13 joint announcement.

In a separate merger development, an administrative law judge of the Federal Energy Regulatory Commission opposed the combination of PacifiCorp and Utah Power & Light, saying the predicted benefits may not outweigh the costs. The commission may vote against the judge's recommendation later this summer.

SDG&E and TE shareholders, the California Public Utilities Commission, the Arizona Corporation Commission, FERC, and others must approve the SDG&E/TE merger.

That agreement would exchange each common share of TE for 1.725 shares of the new company, while SDG&E common shares would exchange one-for-one. Outstanding issues of both preferred and preference stock would be exchanged for similar issues in the new company.

At the time of the merger, SDG&E shareholders would own 56.5% of the stock in the new company, while TE shareholders would own 43.5%.

Top management

Thomas A. Page, SDG&E's president, chairman and CEO would become chairman and CEO, while Einar Greve, TE's chairman, president and CEO, would be president and chief operating officer.

The two utilities would continue operations as separate divisions within the new corporation, whose headquarters would be in San Diego.

Page said the combination would reduce the costs of customer service through improved use of resources and assets of the two companies. "It simply makes good business sense." Greve predicted the consolidation would improve transmission opportunities, providing access to the Western U.S. and Mexico.

At the end of 1987, TE had assets of $2.1 billion; 254,000 customers; revenue of $472 million; and net income of $135 million, including returns from subsidiaries. SDG&E had assets of $3.6 billion; 1-million customers; $1.9 billion in revenues; and net income of $197 million, including that from subsidiaries.

PacifiCorp, UP&L set back

PacifiCorp and UP&L will have a month to respond to the 250-page recommendation prior to FERC's vote at a still-unscheduled hearing later this summer.

Patrick Slattery of PacifiCorp said both companies maintain that merger benefits are substantial and compelling. He expects the companies to respond to each of 91 points that the judge listed in the recommendation.

"We continue to remain optimistic," Slattery added. Four state regulatory commissions have approved the merger, and three have yet to decide.

Major energy shortages anticipated in 1990s, says survey

WASHINGTON—Sixty-two percent of the public and 73 percent of energy opinion leaders said major energy shortages are likely over the next decade or so, while more than 25 percent of each group said shortages are very likely, says a national survey on U.S. energy poliel released in June by the League of Women Voters Education Fund (LWVEF) and Gallup Organization Inc.

In March, LWVEF surveyed 271 representatives of the energy industry, and environmental and consumer advocael groups. The public opinion survey, commissioned by LWVEF, was conducted in December 1987 by Gallup.

Eighty-eight percent of environmental and consumer advocates and 75 percent of industry respondents rated federal policies and programs of the past 10 years either "somewhat ineffective" or "not at all effective" in ensuring adequate future energy supplies.

Industry and public-interest respondents agreed that achieving energy self-sufficienel should be an important consideration in national energy poliel. Eighty-two percent of the opinion leaders either "oppose" or "strongly oppose" increasing U.S. dependence on imported oil to meet energy needs.

Expanding use of natural gas drew support from 71 percent of respondents from the public and 88 percent from industry. Almost all of the opinion leaders favored energy-efficient technologies and conservation measures as ways to meet future energy needs. Both groups favored more hydroelectric power, solar energy, photovoltaics, geothermal energy, cogeneration and alternative fuels.

Fifty-three percent of the general public would not relax environmental controls to produce more energy; 96 percent of the public interest leaders surveyed agreed; 52 percent of the industry respondents favored doing so in order to produce more energy.

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Plant operating expenses worry top N-executives

CHICAGO—The top issue facing more than half of U.S. and Canadian nuclear utility executives is plant operating costs, according to a recent survey by Cresap management consultants.

Nuclear Regulatory Commission "ratcheting" was ranked as the second-highest concern among the respondents, but with about a third of the weighted score of operating costs.

Key drivers

"Recognition that management matters are the key drivers of plant performance and cost is finally taking hold," explained Leonard R. Wass, vice president and head of Cresap's Energy Practice.

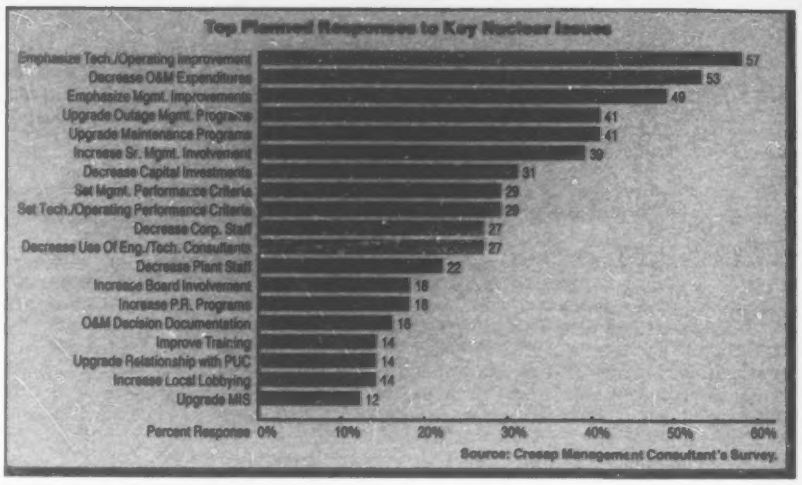
More than half of the U.S. and Canadian nuclear licensees responded. About 80 percent had nuclear line management responsibility, and more than 60 percent had titles of vice president or above, cited Cresap.

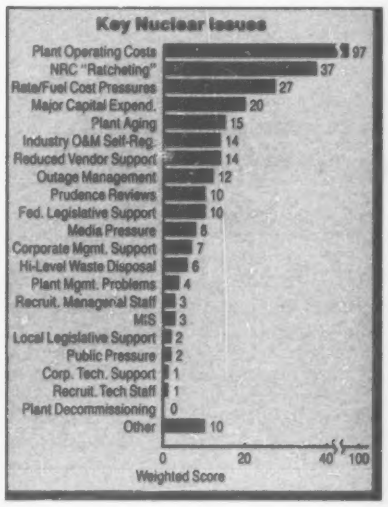
None of the respondents chose plant decomissioning as a key issue, while pressure from the public and media ranked very low as concerns, in comparison.

With concerns focusing on plant operating costs, it's not surprising that the top planned response selected was to emphasize technical and operational improvements. That choice was selected by 57 percent of all respondents and by 73 percent of those responding to plant operating costs as the key issue.

Financial issues

With three of the four top issues selected being financial in nature, nuclear utilities recognize the importance of controlling operating costs, Wass added. Over half indicated that they plan to decrease operating and maintenance expenditures.


Top Planned Responses to Key Nuclear Issues
Emphasize Tech./Operating Improvement 57
Decrease O&M Expenditures 53
Emphasize Mgmt. Improvements 49
Upgrade Outage Mgmt. Programs 41
Upgrade Maintenance Programs 41
Increase Sr. Mgmt. Involvement 39
Decrease Capital Investments 31
Set Mgmt. Performance Criteria 29
Set Tech./Operating Performance Criteria 29
Decrease Corp. Staff 27
Decrease Use Of Eng./Tech. Consultants 27
Decrease Plant Staff 22
Increase Board Involvement 18
Increase P.R. Programs 18
O&M Decision Documentation 16
Improve Training 14
Upgrade Relationship with PUC 14
Increase Local Lobbying 14
Upgrade MIS 12
Percent Response 0% 10% 20% 30% 40% 50% 60%
Source: Cresap Management Consultant's Survey.



Underwater robot cleans tank bottoms at Susquehanna 2

COLUMBIA, MD—Pennsylvania Power & Light Co. recently used a remotely controlled underwater vehicle, called a Superscavenger, to clean materials from the bottom of a condensate storage tank at its Susquehanna nuclear plant.

ALARA considerations played a major role in the company's decision to use a telerobot, rather than employ divers to clean the tank bottom. The underwater robot, which was developed by ARD Corporation, was equipped with an underwater video camera and lights. It was maneuvered by an operator who controlled the device's movement across the 40-ft round tank using a television monitor installed in a remote control station.

The waste recovered was processed through a portable demineralization system.

Preparation

Preparation for the operation involved detailed planning by the utility and involved detailed procedures, writing, staff approvals and equipment setup and hydrotest.

The actual cleaning operation was completed in over two crew shifts.

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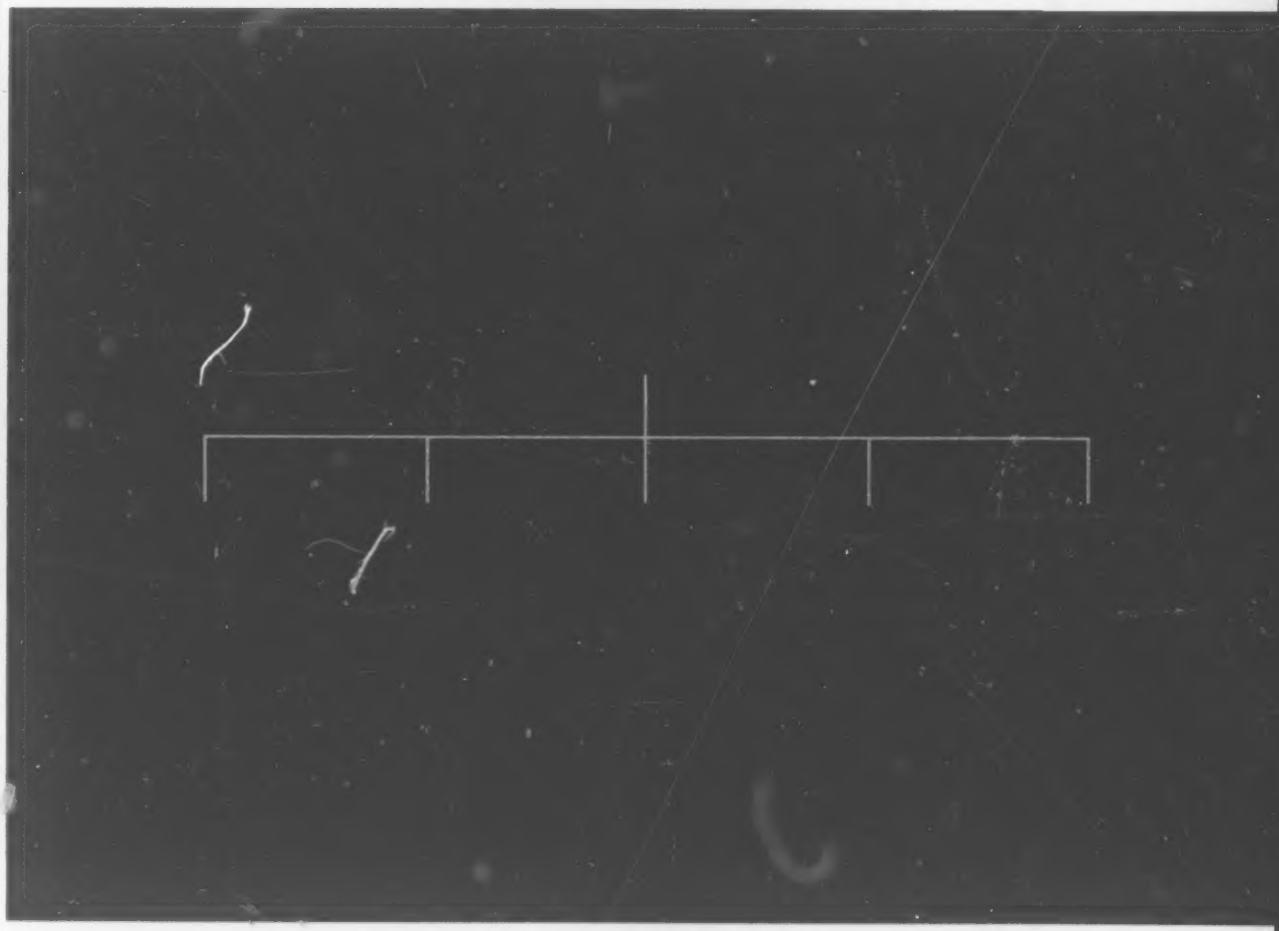

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